Amendments to the Drawings

The attached sheet of drawings includes changes to Figure 3 to delete an incorrect duplicate reference numeral "47". This sheet replaces the original sheet for Fig. 3.

Attachment: Replacement Sheet for Fig. 3
Annotated Sheet Showing Changes to Fig. 3.

Remarks

Brief Summary of the August 24, 2005 Final Office Action:

In the Final Office action mailed August 24, 2005, Applicant's arguments with respect to Claim 1-3 and 8-15 were considered but were deemed to be moot in view of a new ground(s) of rejection.

Claim 1 was rejected under 35 USC § 102(b) as being anticipated by U.S. Pat. No. 6,232,753 ("Pasotti et al."). Claim 2 was rejected under 35 U.S.C. § 103 as being unpatentable over Pasotti et al. in view of U.S. Pat. No. 4,942,312 ("Stevens et al.").

Claims 3, 8, 11, 12, 14, and 15 were rejected under 35 U.S.C. § 103 as being unpatentable over Pasotti et al. in view of U.S. Pat. No. 6,462,526 ("Tanase").

Claims 9 and 10 were rejected under 35 U.S.C. § 103 as being unpatentable over Pasotti et al. and Tanase in view of U.S. Pat. No. 4,400,211 ("Yokomizo et al.").

Claim 13 was rejected under 35 U.S.C. § 103 as being unpatentable over Pasotti et al. in view of Tanase and further in view of U.S. Pat. No. 6,686,728 ("Nakajima") and U.S. Pat. No. 4,942,312 ("Stevens").

Claims 5-7 are allowed.

Claim 4 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Each of these rejections is discussed below:

Allowable Claims 5-7:

Applicant thanks the Examiner for allowance of Claims 5-7.

Objection to Claim 4:

Applicant thanks the Examiner for the indication of allowability for the subject matter of claim 4 if rewritten in independent form. However, Applicant declines to rewrite claim 4 into independent form at this time in view of the arguments presented below for the patentability of its base claim, independent claim 1.

§ 102(b) Rejection of Claim 1:

Note that Claims 1 through 4 have been amended for clarity by reciting that the Applicant's voltage regulator supplies a low current load with a more regulated voltage supply and that the Applicant's voltage regulator supplies a high current load with a less regulated voltage supply. A high current regulation means provides a coarse level of voltage regulation to the common supply voltage delivered to a high current load. A low current feedback regulation means provides a fine level of regulation the common supply voltage delivered to the low current load, where the low current feedback means has an output line connected to the control means of the high current regulation means. The high current regulation means and the low current feedback regulation means are found in Fig. 1 and the corresponding discussion on pages 5 and 6 of the specification.

In order to anticipate a claim, a reference must teach all the elements of a claim. See Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631 (Fed. Cir. 1987). Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by Pasotti et al.

With reference to rejection of Claim 1, the Examiner on page 3 of the August 24, 2005 Office Action stated that: "Pasotti et al. discloses a voltage regulator for supplying a low current load with a regulated voltage supply and a high current load with a regulated voltage supply, comprising:

regulation means (MR-MRn) for providing a level of voltage regulation to a common supply voltage (HV) delivered to a high current load (SL1-SLn), the regulation means including a control means; and feedback regulation means (11, 14, 15) for providing a level of regulation to the common supply voltage (HV) delivered to a low current load (SL1-Sln),the feedback means having an output line (15) connected to the control means of the regulation means whereby the output level of the feedback means influences the regulation means."

The Examiner states that the Pasotti elements (SL1-SLn) are the high current load and at the same time that the same elements (SL1-SLn) are the low current load. Clearly, Pasotti only shows low current loads that are driven by respective "low current" transistors (MR1-MRn). All of the gate terminals of the transistors MR and MR1-MRn are tied together and connected to the output terminal 15 of the comparator 11.

The regulated voltage Vreg of Pasotti is connected to Pasotti's output terminal OUT and not to the gate terminals of Pasotti's transistors MR1-MRn. There is no teaching, suggestion, or motivation in the Pasotti reference regarding the Applicant's claimed high current regulation means for providing a coarse level of voltage regulation to a common supply voltage delivered to a high current load. Applicant's claimed high current regulation means (NMOS transistor 47) includes a control means (the gate terminals of 47) to which the Applicant's low current feedback regulation means (transistor 23) is connected through the output line 35. The Examiner apparently is trying to make the Pasotti transistors MR1-MRN perform both of the Applicant's separate claim 1 elements, that is, the high current regulation means 47 as well as the low current feedback regulation means provided as comparator 17 and transistor 23. There is no teaching or suggestion in Pasotti that discloses an output level of the Applicant's claimed feedback regulation means influencing

Applicant's claimed high current regulation means. Since the Pasotti reference does not teach all of the Applicant's elements of Claim 1, Pasotti does not anticipate Applicant's Claim 1.

§ 103(a) Rejection of Claim 2:

In order for a claim to be obvious, a reference, alone or in combination with another reference, must teach or suggest all claim limitations. See MPEP § 2143. Applicant asserts that the cited references, alone or in combination, do not teach or suggest all the elements of Applicant's claims and therefore these claims are patentable.

Claim 2 was rejected under § 103(a) and the Examiner on page 3 of the August 24, 2005 Office Action stated that: "... it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Pasotti et al to include depletion type NMOS transistors in order to produce a stable output voltage as taught by Stevens."

As shown above, Pasotti et al. does not teach or suggest all the elements of independent claim 1 from which claim 2 depends. Stevens teaches an integrated circuit with two NMOS depletion transistors which have selected parameters such that when the transistors are connected, the circuit will produce a stable DC output voltage in response to a variable input voltage. Like Pasotti et al., Stevens itself does not teach Applicant's high current regulation means, including a control means, for providing a coarse level of voltage regulation to a common supply voltage delivered to a high current load. Nor does Stevens itself teach the Applicant's low current feedback regulation means for providing a fine level of regulation to the common supply voltage delivered to a low current load, the feedback regulation means having an output line connected to the control means of the regulation

means whereby an output level of the feedback regulation means influences the regulation means.

Because neither Pasotti et al. nor Stevens, alone or in combination, teaches or suggests all the elements of Applicant's claim 2, claim 2 is not obvious.

§ 103(a) Rejection of Claim 3

Claim 3 was rejected under § 103(a), on the grounds that it would have been obvious to combine the teachings of Pasotti et al. with Tanase's teachings about using a bandgap regulator for supplying a reference voltage.

As shown above, Pasotti et al. neither teaches nor suggests all the elements of Applicant's independent claim 1, from which claim 3 depends. Tanase is said to teach bandgap voltage regulators. Tanase does not teach or suggest Applicant's high current regulation means (including a control means) for providing a coarse level of voltage regulation to a common supply voltage delivered to a high current load and low current feedback regulation means for providing a fine level of regulation to a common supply voltage delivered to a low current load and having an output line connected to the regulation means' control means. Because neither Pasotti et al. nor Tanase, alone or in combination, teaches or suggest all the elements of Applicant's claim 3, claim 3 is not obvious.

§ 103(a) Rejection of Claim 8

According to the Office action, claim 8 was rejected under § 103(a) due to the teachings of Pasotti et al. in view of Tanase, which teaches that bandgap regulators are used for supplying a reference voltage.

Unlike Applicant's claim 8, neither Pasotti et al. nor Tanase, alone or in combination, teach a first regulator stage having a first current driver device having a first

output line and a second current device driver having a control gate coupled to the first output line. Instead, Pasotti et al. teaches an output line of a first transistor MR which is connected to the output, not the control gate, of transistors MR1 . . . MRn. Therefore, neither Pasotti et al. nor Tanase, alone or in combination, teaches or suggests all the limitations of Applicant's claim 8 and the claim is not obvious.

Claims 11, 12, 14, and 15

Claims 11, 12, 14, and 15 were rejected in the Office action under § 103(a) as being unpatentable over Pasotti et al. in view of Tanase. These claims are dependent claims of independent claim 8. As shown above, independent claim 8 is not obvious since neither Pasotti et al. nor Tanase, alone or in combination, teaches or suggests all the limitations of Applicant's claim 8. Therefore, dependent claims 11, 12, 14, and 15 are also not obvious for at least the same reasons as claim 8.

§ 103(a) Rejection of Claims 9 and 10

Claims 9 and 10 were rejected in the Office action under § 103(a) as being unpatentable over Pasotti et al. and Tanase in view of Yokomizo et al. Claims 9 and 10 are dependent claims of independent claim 8. As shown above, independent claim 8 is not obvious since neither Pasotti et al. nor Tanase, alone or in combination, teaches or suggests all the limitations of Applicant's claim 8. Therefore, dependent claims 9 and 10 are also not obvious for at least the same reasons as claim 8. Yokomizo was cited as teaching a charge pump and providing power to an oscillator circuit and does not remedy the deficiencies of Pasotti nor Tanase.

§ 103(a) Rejection of Claim 13

Claim 13 was rejected in the Office action under § 103(a) as being unpatentable over Pasotti et al. in view of Tanase and further in view of Stevens and U.S. Pat. No. 6,686,728 to Nakajima. Claim 13 is a dependent claim of independent claim 8. As shown above, independent claim 8 is not obvious since neither Pasotti et al. nor Tanase, alone or in combination, teaches or suggests all the limitations of Applicant's claim 8. Nakajima was said to teach driving a second transistor from the output of a first transistor to constitute a base drive transistor circuit for driving the second transistor and does not remedy the deficiencies of Pasotti, Tanase, and Stevens. Therefore, dependent claim 13 is also not obvious for at least the same reasons as claim 8.

Conclusion

Claims 5-7 were indicated as allowable by the Examiner. Fig. 3 of the drawings has been amended to delete an incorrect duplicate reference numeral "47". Applicant has amended a paragraph on page 5 of the specification to correct errors in previously amending this paragraph and for clarity. A paragraph on page 7 has been amended to correctly identify an external V_{cc} voltage and to indicate that line 35 supplies a low current load.

Claims 1, 2, 3, 4, were amended for clarity. It is believed that analysis of the cited Pasotti et al. reference shows that not all of Applicant's claim elements are neither taught nor suggested therein. Applicant believes that claim 1 is not anticipated and, further, that claims 2, 3, and 8-15 are not obvious. All of the claims in the present application are believed to be allowable and such action is respectfully requested.

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signed: Sally Azevedo

Typed Name: Sally Azevedo

Date: November 21, 2005

Respectfully submitted,

Patrick T. King

Patrick T. King
Reg. No. 28,231

Schneck & Schneck
P.O. Box 2-E
San Jose, CA 95109-0005
(408) 297-9733

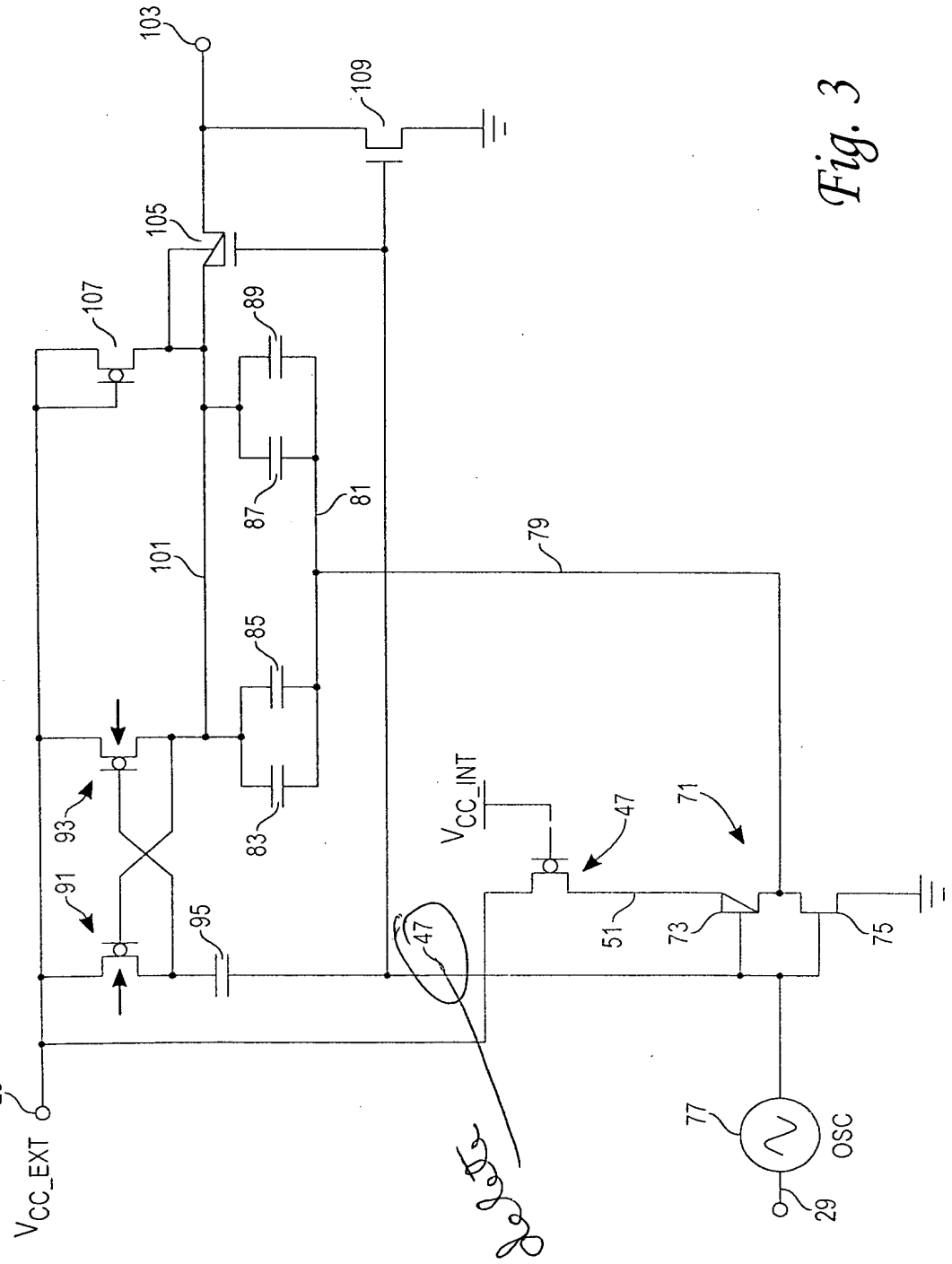

Fig. 3